

Teknokroma's Vela UHPLC and HPLC Columns



Surfing on the Crest of the wave

Vela UHPLC and HPLC columns are engineered for high-end chromatography, delivering exceptional performance across diverse applications. Designed to exceed the expectations of laboratory scientists, **these columns ensure precise, robust, and reproducible results** in pharmaceutical, environmental, and food analysis.

FEATURES

- High-pressure endcapping method: 99% blockage of free silanols (HE).
- Verified true particle size.
- Maximized pore size utilization

AVAILABLE PHASES

Reversed Phase

C18 UE
C18 UET
C8 UE
C8 UET
C18 AQ
C8 AQ
Phenyl Hexyl
Bi-Phenyl
C30
C4
Amino-Sugar

Normal Phase

Si
Cyano
Amino

HILIC Phase

Diol
EP4
PEI



New line from UHPLC to Preparative

VELA FEATURES AND BENEFITS

High-Pressure Endcapping (UE)

- Achieves 99% blockage of free silanols on the silica surface (ultra endcapping UE), preventing reactive interactions.
- Benefits:
 - Superior Peak Shapes: Minimizes peak tailing, especially for analytes with polar or basic groups.
 - Enhanced Reproducibility: Reliable results even in complex separations.
 - Improved Sensitivity: Reduces unwanted analyte adsorption, lowering detection limits.

Verified True Particle Size

- Consistent particle size is a critical factor in enhancing separation efficiency, ensuring reliable and reproducible results in every application.
- Benefits:
 - Monodisperse Particle Distribution: A precisely uniform particle size reduces band broadening, leading to superior resolution and sharper peak separation.
 - Optimized Packing: Engineered for uniform packing density, this feature minimizes variability between runs and enhances reproducibility, providing consistent and predictable performance.
 - Enhanced Flow Uniformity: For improved performance at high flow analysis.

Maximized Pore Size Utilization

- Essential for high-resolution analysis of large or complex molecules.
- Benefits:
 - Enhanced Analyte Accessibility: Promotes full interaction with the stationary phase.
 - Improved Retention and Selectivity: Effective for reversed-phase chromatography.
 - Uniform pore distribution minimizes diffusion resistance, improving analyte interaction and resolution without sacrificing speed.

These features ensure the Vela columns provide exceptional chromatographic performance, enabling precise, reliable, and efficient analyses for complex separations.



The Fresh Breeze of Chromatography

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Professionally Friendly

New line from UHPLC to Preparative

TECHNICAL SPECIFICATIONS

- Dimensions: All standard dimensions
- Long 50, 100, 150, 250 mm
- ID 2.1, 3, 4, 4.6, 10, 21.2 mm
- Porosity: 100 Å, C30 200 Å
- ParticleSize: 1.7 µm, 3 µm, 5 µm, 10 µm (Depends on the bonding phase)
- SolventCompatibility: Wide range of organic and aqueous solvents
- Silanol low activity 99,99%
- Metallic Impurities (Na, Mg, Al, Ca, Fe, Zr, Ti): Less than 10 ppm of each one
- particle substrate: Spherical Silica
- Surface Area: 315 m²/g
- Pore Volume: 0.8 ml/g

Bonding Phase	C8 UE	C8 UET	C8 AQ	C18 UE	C18 UET	C18 AQ	PH Hexyl	BIP	C30	Amino -Sugar	C4	Si	NH2	CN	EP4	PEI	DIOL
Separation Mode	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	RP	NP	NP	NP	HILIC	HILIC	HILIC
Spherical Particle	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica	Silica
% Carbon Load	11	11	9	16	18	13	14	12	11	3	7	0	4	7	8	10	5
pH Range	2 to 9	1 to 9	2 to 9	2 to 11	1 to 11	2 to 9	2 to 9	2 to 9	2 to 8	2 to 8	2 to 8	2 to 8	2 to 8	2 to 8	1 to 8	2 to 8	2 to 8
Endcapped	UE	UE	NO	UE	UE	NO	UE	UE	UE	NO	UE	NO	NO	NO	NO	NO	NO
Particle size µm	1,7-3 5-10	1,7-3 5-10	1,7-3 5-10	1,7-3 5-10	1,7-3 5-10	1,7-3 5-10	1,7-3 5-10	1,7-3 5-10	3 5-10	3-5	3-5	1,7-3 5-10	1,7-3 5-10	1,7-3 5	1,7-3 5	1,7-3 5	1,7-3 5
Pore Diameter Å	100	100	100	100	100	100	100	100	200	100	100	100	100	100	100	100	100
Surface Area m ² /g	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
Pore Volume ml/g	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Metallic Impurities (Na, Mg, Al, Ca, Fe, Zr, Ti)	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm
USP	L7	L7	L7	L1	L1	L1	L11	L11	L62	L8	L26	L3	L8	L10	-	-	L20

APPLICATIONS

- Pharmaceutical: Precise quantification and profiling of drugs and metabolites
- Environmental: Detection of organic pollutants with high sensitivity.
- Food: Rigorous quality control in food and beverage testing.
- Method Robustness: Suitable for HPLC methods requiring consistent performance under stringent conditions.

The Fresh Breeze of Chromatography

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Professionally Friendly

TOP ORDERED (U)HPLC COLUMNS PART NUMBERS

TR-050011 Vela C18 UE HPLC Column 1,7um 50 x 2,1 mm
TR-050031 Vela C18 UE HPLC Column 1,7um 100 x 2,1 mm
TR-050157 Vela C18 UE HPLC Column 3um 150 x 4,6 mm
TR-050257 Vela C18 UE HPLC Column 5um 150 x 4,6 mm
TR-050277 Vela C18 UE HPLC Column 5um 250 x 4,6 mm

TR-052011 Vela C18 UET HPLC Column 1,7um 50 x 2,1 mm
TR-052031 Vela C18 UET HPLC Column 1,7um 100 x 2,1 mm
TR-052157 Vela C18 UET HPLC Column 3um 150 x 4,6 mm
TR-052257 Vela C18 UET HPLC Column 5um 150 x 4,6 mm
TR-052277 Vela C18 UET HPLC Column 5um 250 x 4,6 mm

TR-051011 Vela C18 AQ HPLC Column 1,7um 50 x 2,1 mm
TR-051031 Vela C18 AQ HPLC Column 1,7um 100 x 2,1 mm
TR-051157 Vela C18 AQ HPLC Column 3um 150 x 4,6 mm
TR-051257 Vela C18 AQ HPLC Column 5um 150 x 4,6 mm
TR-051277 Vela C18 AQ HPLC Column 5um 250 x 4,6 mm

TR-05C011 Vela C8 UE HPLC Column 1,7um 50 x 2,1 mm
TR-05C031 Vela C8 UE HPLC Column 1,7um 100 x 2,1 mm
TR-05C157 Vela C8 UE HPLC Column 3um 150 x 4,6 mm
TR-05C257 Vela C8 UE HPLC Column 5um 150 x 4,6 mm
TR-05C277 Vela C8 UE HPLC Column 5um 250 x 4,6 mm

TR-057011 Vela C8 UET HPLC Column 1,7um 50 x 2,1 mm
TR-057031 Vela C8 UET HPLC Column 1,7um 100 x 2,1 mm
TR-057157 Vela C8 UET HPLC Column 3um 150 x 4,6 mm
TR-057257 Vela C8 UET HPLC Column 5um 150 x 4,6 mm
TR-057277 Vela C8 UET HPLC Column 5um 250 x 4,6 mm

TR-05E011 Vela C8 AQ HPLC Column 1,7um 50 x 2,1 mm
TR-05E031 Vela C8 AQ HPLC Column 1,7um 100 x 2,1 mm
TR-05E157 Vela C8 AQ HPLC Column 3um 150 x 4,6 mm
TR-05E257 Vela C8 AQ HPLC Column 5um 150 x 4,6 mm
TR-05E277 Vela C8 AQ HPLC Column 5um 250 x 4,6 mm

TR-055011 Vela Phenyl-Hexyl HPLC Column 1,7um 50 x 2,1 mm
TR-055031 Vela Phenyl-Hexyl HPLC Column 1,7um 100 x 2,1 mm
TR-055157 Vela Phenyl-Hexyl HPLC Column 3um 150 x 4,6 mm
TR-055257 Vela Phenyl-Hexyl HPLC Column 5um 150 x 4,6 mm
TR-055277 Vela Phenyl-Hexyl HPLC Column 5um 250 x 4,6 mm

TR-056011 Vela BIP HPLC Column 1,7um 50 x 2,1 mm
TR-056031 Vela BIP HPLC Column 1,7um 100 x 2,1 mm
TR-056157 Vela BIP HPLC Column 3um 150 x 4,6 mm
TR-056257 Vela BIP HPLC Column 5um 150 x 4,6 mm
TR-056277 Vela BIP HPLC Column 5um 250 x 4,6 mm

TR-05H011 Vela SI HPLC Column 1,7um 50 x 2,1 mm
TR-05H031 Vela SI HPLC Column 1,7um 100 x 2,1 mm
TR-05H157 Vela SI HPLC Column 3um 150 x 4,6 mm
TR-05H257 Vela SI HPLC Column 5um 150 x 4,6 mm
TR-05H277 Vela SI HPLC Column 5um 250 x 4,6 mm

TR-053011 Vela CN HPLC Column 1,7um 50 x 2,1 mm
TR-053031 Vela CN HPLC Column 1,7um 100 x 2,1 mm
TR-053157 Vela CN HPLC Column 3um 150 x 4,6 mm
TR-053257 Vela CN HPLC Column 5um 150 x 4,6 mm
TR-053277 Vela CN HPLC Column 5um 250 x 4,6 mm

TR-054011 Vela NH2 HPLC Column 1,7um 50 x 2,1 mm
TR-054031 Vela NH2 HPLC Column 1,7um 100 x 2,1 mm
TR-054157 Vela NH2 HPLC Column 3um 150 x 4,6 mm
TR-054257 Vela NH2 HPLC Column 5um 150 x 4,6 mm
TR-054277 Vela NH2 HPLC Column 5um 250 x 4,6 mm

TR-05J011 Vela DIOL HPLC Column 1,7um 50 x 2,1 mm
TR-05J031 Vela DIOL HPLC Column 1,7um 100 x 2,1 mm
TR-05J157 Vela DIOL HPLC Column 3um 150 x 4,6 mm
TR-05J257 Vela DIOL HPLC Column 5um 150 x 4,6 mm
TR-05J277 Vela DIOL HPLC Column 5um 250 x 4,6 mm

TR-059011 Vela EP4 HPLC Column 1,7um 50 x 2,1 mm
TR-059031 Vela EP4 HPLC Column 1,7um 100 x 2,1 mm
TR-059157 Vela EP4 HPLC Column 3um 150 x 4,6 mm
TR-059257 Vela EP4 HPLC Column 5um 150 x 4,6 mm
TR-059277 Vela EP4 HPLC Column 5um 250 x 4,6 mm

TR-05A011 Vela PEI HPLC Column 1,7um 50 x 2,1 mm
TR-05A031 Vela PEI HPLC Column 1,7um 100 x 2,1 mm
TR-05A157 Vela PEI HPLC Column 3um 150 x 4,6 mm
TR-05A257 Vela PEI HPLC Column 5um 150 x 4,6 mm
TR-05A277 Vela PEI HPLC Column 5um 250 x 4,6 mm

TR-058157 Vela C30 HPLC Column 3um 150 x 4,6 mm
TR-058257 Vela C30 HPLC Column 5um 150 x 4,6 mm
TR-058277 Vela C30 HPLC Column 5um 250 x 4,6 mm

TR-05G157 Vela Amino-Sugar HPLC Column 3um 150 x 4,6 mm
TR-05G257 Vela Amino-Sugar HPLC Column 5um 150 x 4,6 mm
TR-05G277 Vela Amino-Sugar HPLC Column 5um 250 x 4,6 mm

TR-05F157 Vela C4 HPLC Column 3um 150 x 4,6 mm
TR-05F257 Vela C4 HPLC Column 5um 150 x 4,6 mm
TR-05F277 Vela C4 HPLC Column 5um 250 x 4,6 mm

GUARD COLUMNS PART NUMBERS

TR-C-160 Holder for 1cm guard columns
TR-C-160K1 Holder + 2 Cartridges C18
TR-C-160-1 C18 Cartridges (5 units)
TR-C-160K3 Holder + 2 Cartridges C8
TR-C-160-3 C8 Cartridges (5 units)



TR-C-160-2 Si Cartridges (5 units)
TR-C-160-4 NH2 Cartridges (5 units)
TR-C-160-6 CN Cartridges (5 units)
TR-C-160-15 DIOL Cartridges (5 units)